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AUTHOR Seever, Mark L.
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ABSTRACT

This report evaluates the implementation of the "Long-Range Magnet School Plan" at Metropolitan Advanced Technical Magnet High School in Kansas City, Missouri for academic year 1990-91. Introductory sections describe the program, and the evaluation design and methodology. Results on enrollment indicated that only ninth and tenth grades were operational. Enrollment goals for the ninth grade exceeded expectations, but the tenth grade fell below expectations (the overall enrollment was 76% of capacity). Site visits found evidence of the implementation of the magnet theme in the school. This evidence included displays regarding job opportunities, career choices, occupational cluster information, and equipment. Random observations documented the infusion of career, managerial, business ownership, mathematics, critical thinking, research, and responsibility theme components in the classrooms. Staff, parents, and students were satisfied with the school and magnet theme. Staff enjoyed teaching at the school and regularly infused theme components into classroom activities. Parents reported understanding the magnet theme and thinking that the magnet school selection process was fair. Students believed their education would help in reaching future educational and occupational goals. Achievement scores in reading, mathematics, and written expression were below district and national levels. Missouri Mastery and Achievement Test scores were comparable to district levels but below state averages. Degrees of Reading Power Test scores were below both district and national levels. The following recommendations were made: (1) make available to the District's Evaluation Office a more current planning outline; (2) consult with faculty when planning staff development sessions; (3) explore student behavior and the handling of that behavior by the faculty and administration; (4) increase parental involvement at MATHS; and (5) increase efforts at recruiting students, especially non-minority. Examples of the teacher, student, and parents survey instruments are included. (MDH)

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Formative Evaluation of the Metropolitan Advanced Technical Magnet High School

1990-1991

Evaluation Office

The School District of Kansas City, Missouri

KANSAS CITY, MO. SCHOOL DISTRICT
"Building our future"

August 1991

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Formative Evaluation of the Metropolitan Advanced Technical Magnet High School

1990-1991

Mark L. Seever
Program Evaluator

August 1991

Evaluation Office
Desegregation Planning Department
The School District of Kansas City, Missouri

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Executive Summary

Metropolitan Advanced Technical Magnet High School has completed the first year of implementing its magnet theme, Advanced Technology. Only ninth and tenth grades were open with eleventh and twelfth grades to be added, one at a time, over the next two years. Enrollment goals were not met for either grade, although tenth grade was within three percentages. The program was filled to 76% capacity indicating room for more students.

Site visits found visible evidence of theme implementation in the school. This evidence includes displays, job opportunities, career choices, occupational cluster information and equipment. Random observations also documented infusion of major theme components in the classrooms.

Staff, parents and students seem to be satisfied with the school and magnet theme. Staff enjoy teaching at Metro and are regularly infusing theme components into classroom activities. Parents report understanding the magnet theme and thinking that the magnet school selection process is fair. Students believe their education at Metro will help in reaching future educational or occupational goals.

Achievement scores in reading, math and written expression are below district and national levels. MMAT scores were comparable to district levels but below state averages. DRP scores were below both district and national levels.

FORMATIVE EVALUATION OF THE METROPOLITAN ADVANCED TECHNICAL MAGNET HIGH SCHOOL

1990-1991

Introduction

According to the *Long Range Magnet School Plan*(Hale & Levine, 1986) subsequently referred to in this report as LRMP, the Metropolitan Advanced Technical High School(MATHS) was to be planned during 1987-1989 and implemented starting with the 1989-1990 school year. Because the opening of MATHS was delayed one year, 1990-1991 will be considered its first year of implementation. The LRMP states there should be two years of formative evaluations before a summative evaluation is conducted after the third year. This report outlines MATHS's initial efforts at implementing the magnet theme. Included in this report are demographic details, perception data of staff, parents and students, operational components, the degree to which thematic components were infused into regular classroom instruction, the achievement outcomes of the students and the school's adherence to the planning outline developed during the 1987-1989 school years (Metropolitan Advanced Technical High School Site Task Force, 1988).

Program Description

The Advanced Technical Theme was implemented at MATHS with the start of the 1990-1991 school year. According to the LRMP, the Technical Magnet school will provide students with "... advanced technical and vocational studies, as well as solid academic preparation that qualifies graduates for post-secondary education"(Hale & Levine, 1986, p. 106). The school opened, by design, with ninth and tenth graders. The remaining grades are to be added over the next two years, one grade at a time. Because of this, the program will be implemented in stages as grade levels are added. Entering students, generally ninth graders, will first be enrolled in a Principles of Technology course which will include introductory study of general electronics principles underlying later learning in a wide variety of technical fields. In succeeding semesters, students who chose to will major in occupational clusters which are designed to provide entry-level employment. At the same time the curriculum is to be strengthened to provide other students the opportunity, upon graduation, to further their studies at the post-secondary level.

Evaluation Design

This evaluation of MATHS focuses upon the initial implementation of the program during the first year of operation; the demographic information concerning the student population served by MATHS; the extent to which thematic components are integrated into classroom instruction and throughout the school; the achievement outcomes exhibited by the students; and the perceptions of MATHS teachers, students and parents on the attainment of the school's goals.

The evaluation will address the following questions:

1. What are the student demographics of the school?

2. To what degree is the program being implemented as described in the planning outline?

3. What are the perceptions of parents, students and teachers regarding the program?

4. What are the achievement outcomes of the students attending MATHS as measured by achievement tests selected by the district?

Methodology

Demographic data were collected and reviewed to report the racial composition of the student body.

On-site visits were made to ascertain operational components of the program. These components include the availability of materials and resources, course offerings and the general environment of the school. Observations were held to determine the extent thematic components were taking place in regular classrooms and school-wide.

Outcomes on achievement tests are reported by grade level and minority status.

Surveys were administered to teachers, students and parents to gain their perceptions of the program. Items focused on program implementation, the degree to which the program accomplished its goals and objectives during the 1990-1991 school year, parental involvement, the attitudes and reactions of the students and implementation of the program components.

Results

Enrollment

Program capacity. To determine whether MATHS reached its program capacity, data used by the Kansas City, Missouri School District's(KCMSD) Admissions Office for the

placement of students in magnet programs and data from the Research Office were reviewed. The results are presented in Table 1 by grade level. Ninth grade was at 119% capacity, indicating it attracted 55 more students than needed. Tenth grade fell 196 students below capacity, a rate of 32%. Overall, MATHS was filled to 76% capacity, indicating it attracted 141 students less than district expectations.

Minority and non-minority enrollment. The Federal court has specified enrollment goals(60% minority, 40% non-minority) as a measure of the effectiveness of accomplishing desegregation reform efforts. Enrollment figures cited in this report were drawn from the student membership reports prepared by the KCMSD's Research Office(1990). Figures are based on enrollment data reported on the fourth Wednesday in September.

Enrollment and racial composition results for MATHS are presented in Table 2 by grade level for 1990-1991. Neither ninth nor tenth grade reached the enrollment goals set by the court. Tenth grade came the closest with a minority percentage of 63%, while ninth grade had a minority enrollment percentage of 78%. Overall, MATHS's enrollment was 75% minority, 25% non-minority.

Program Implementation

There were two, first year logistical factors affecting the degree of theme implementation at MATHS that require explanation before continuing. First, in the LRMP the theme was designed so that all entering students, generally ninth graders, would sample introductory courses before deciding in which occupational cluster to major. In its first year of operation

Table 1

Metropolitan Advanced Technical High School
Capacity & Actual Enrollment
September 1990

Grade	Program Capacity[1]	Actual[2]	Difference	% of Capacity
Nine	289	344	55	119%
Ten	289	93	-196	32%
Total	578	437	-141	76%

Note: Percentages are rounded to the nearest whole percent.
[1] Program capacity utilized by the Admissions Office when placing students in magnet programs.
[2] From *September 26, 1990 Student Membership* (Research Office, 1990).

Table 2
Metropolitan Advanced Technical High School
Minority & Non-Minority Enrollment
by Grade-September 1990

	Minority		Non-Minority		
Grade	N	%	N	%	Total
Ninth	270	78%	74	22%	344
Tenth	59	63%	34	37%	93
Total	329	75%	108	25%	437

Note: Percentages are rounded to the nearest whole percent. Enrollment figures are from *September 26, 1990. Student Membership* (Research Office, 1990). Eleventh and twelfth graders were not enrolled during the first year of implementation.

all students were new to MATHS, which limited enrollment in and offerings of more advanced technical classes.

Secondly, MATHS opened without eleventh and twelfth grades, grades in which students were to be concentrating on their occupational cluster.

Course offerings. During the second semester, a list of MATHS course offerings was reviewed to determine program implementation. All ninth and tenth grade theme related classes (17 in all) were being offered, an indication that courses described in the planning outline were developed and staffed.

Physical evidence. Upon entering MATHS a casual observer would not immediately know the theme being implemented. In hallways, most classrooms, lunch room and office, visible evidence was not common.

Site observations for type of physical evidence found that 65% were theme related equipment, 12% occupational cluster information, 10% job opportunities, 8% other theme related displays and 5% career choices. Most of the job opportunities, displays and career choice materials were found in regular classrooms, while occupational cluster information was found mainly in the hallways. Almost all of the equipment was found in lab classrooms.

Classroom observations. During the second semester, random classroom observations were conducted, across all subject areas, to determine the degree of program implementation. An observation consisted of 15 minutes with each minute representing a new observation

interval. One thousand one hundred thirty-five minutes of classroom observation intervals, involving 685 students, were completed for this evaluation.

After reviewing the planning outline, seven program components were identified: 1)career, 2)managerial aspects, 3)owner aspects, 4)math, 5)critical thinking skills, 6)research and 7) responsibility. Results of classroom observations based on these seven components are presented in Figure 1. The reader is cautioned that there are no data available on what is the ideal degree of implementation. The following percentages only describe what is occurring now.

Career component. The career component consisted of career information, descriptions of different careers and employment opportunities. Activities centered around introducing students to different types of careers, descriptions of what people in these occupations do and future employment opportunities. This component occurred in 11% of the observation intervals.

Managerial aspects. In the managerial component, students were informed about different aspects of managing a business and interpersonal skills necessary to communicate with workers. Managerial activities occurred during three percent of the observations.

Owner aspects. Activities related to owning a business, entrepreneurial skills and small business information were part of the owner component. This component was observed four percent of the time.

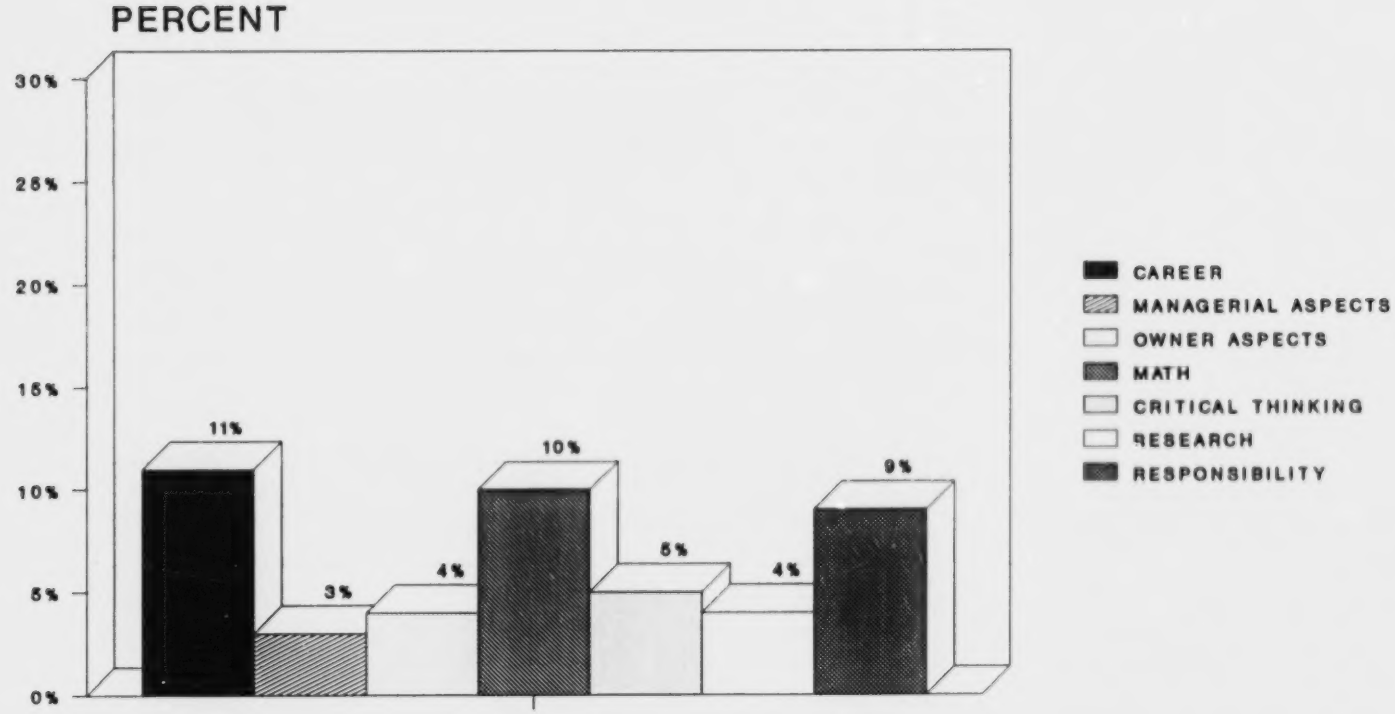
Math component. The math component consisted of activities designed to involve students in measuring, calculating and analyzing. Students were observed engaged in these activities ten percent of the time.

Critical thinking component. According to the planning outline, students were to be taught critical thinking skills including problem solving, reasoning and logic. This component occurred in five percent of the classroom observations.

Research component. Students were to engage in research activities either in vocational or academic areas. This component was observed four percent of the time.

Responsibility component. Students were to learning about responsibility of self, job, family, community, environment, society and leadership. Students were observed engaged in responsibility related activities nine percent of the time.

FIGURE 1
METROPOLITAN ADVANCED TECHNICAL HIGH SCHOOL



THEMATIC COMPONENT

CLASSROOM OBSERVATIONS

Observational data were broken down by grade level, but the results did not vary from the overall findings by more than two percent in any one component category. This would seem to indicate that the program was being implemented evenly, across both grade levels.

Perceptions

Faculty perceptions. Faculty completed a perception survey on the progress of theme implementation at MATHS. Data were collected from 46 staff members and the results are presented in Table 3. Generally, faculty perceptions were positive about MATHS's first year of implementation. When asked if they enjoyed being at MATHS, 86% of those surveyed agreed(item 1). Faculty stated (80%) that they were getting the support needed from academic services(item 10). The facilities at MATHS were conducive to the program's goals and objectives according to 87% of those surveyed(item 12). Eighty-nine percent of the faculty stated that they were clear on MATHS's goals and objectives(item 13). When asked if they regularly infused the Advanced Technology theme in classroom activities, 91% of the respondents agreed(item 16).

There were areas of concern however; 83% of those surveyed disagreed that MATHS was racially balanced this year(item 2). The enrollment figures presented earlier agree with this perception. Ninety-one percent of the faculty disagree that parents were involved at MATHS(item 3). When asked if they had sufficient teaching materials and resources available to them, 56% disagreed(item 4). According to 49% of the respondents, supplemental materials and supplies were unavailable to them(item 5). Forty-seven percent of the faculty disagreed that the staff development sessions helped them in the classroom(item 6).

Faculty were asked to comment on the strong points of the program, hindrances to program implementation and suggestions to help improve the program. Comments are summarized here if they were included on at least 10% of the surveys. The faculty was mentioned as a strength on 46% of the surveys, while the administration was included in 15%. Twenty percent stated that the infusion of academics and technology was the strength of the program. Preparing students for the future, whether educational or occupational was included on 15% of the surveys. The equipment needed to implement the program was mentioned by 15% of the respondents.

A lack of supplies in the classroom was mentioned on 22% of the surveys as a hindrance to program implementation. Thirty-two percent of those surveyed included student behavior

Table 3

Metropolitan Advanced Technical High School

Teacher Perceptions, Spring 1991

(N= 46)

Item	Content	Responses	N	%
1.	I enjoy teaching at Metropolitan Advanced Technical Magnet.	Agree	38	86
		Disagree	6	14
2.	The student population appears to be racially balanced this year (60/40 composition).	Agree	8	17
		Disagree	38	83
3.	I believe most parents are involved at Metropolitan Advanced Technical Magnet.	Agree	4	9
		Disagree	42	91
4.	I have sufficient teaching materials and resources available to me.	Agree	20	44
		Disagree	25	56
5.	Supplemental materials and supplies are available to me.	Agree	23	51
		Disagree	22	49
6.	I find the activities covered in staff development sessions at Metropolitan Advanced Technical magnet helped me in the classroom.	Agree	24	53
		Disagree	21	47
7.	The building administration has provided the support I need to conduct my classes.	Agree	35	78
		Disagree	10	22
8.	I believe the study of advanced technology has improved most students' academic achievement and job marketability.	Agree	28	64
		Disagree	16	36
9.	I feel the climate (relations, attitudes, feelings, tone, etc.) of the school is good.	Agree	30	65
		Disagree	16	35
10.	The academic support services (counselors, office staff, etc.) have provieded the support I need to conduct my classes.	Agree	35	80
		Disagree	9	21
11.	The physical plant support services (maintenance, janitorial, etc.) have provided the support I need to conduct my classes.	Agree	34	74
		Disagree	12	26
12.	The facilities at Metropolitan Advanced Technical Magnet are conducive to the program's goals and objectives.	Agree	39	87
		Disagree	6	13
13.	Metropolitan Advaned Technical Magnet's goals and objectives are clear to me.	Agree	41	89
		Disagree	5	11
14.	I believe most students want to be at Metro.	Agree	30	65
		Disagree	16	35
15.	Most students at Metro are learning to be responsible.	Agree	27	63
		Disagree	16	37
16.	I regularly infuse advanced technology and other theme components into classroom activities.	Agree	40	91
		Disagree	4	9
17.	I believe students at Metropolitan Advanced Technical Magnet are being prepared to further their education or pursue their occupational goals.	Agree	36	78
		Disagree	10	22
18.	Students at Metro are being taught critical thinking skills.	Agree	30	65
		Disagree	16	35
19.	Students at Metro are being exposed to different (owner's, employer's and employee's) aspects of business.	Agree	31	67
		Disagree	15	33
20.	Overall, I believe Metropolitan Advanced Technical Magnet is accomplishing its goals and objectives.	Agree	30	68
		Disagree	14	32

Note: Percentages are rounded to the nearest whole percent.

as hindering implementation. This category included student misbehavior as well as the handling of that misbehavior by the administration.

The furnishing of supplies to teachers would improve MATHS according to 15% of the respondents. Thirteen percent stated that changing the student selection process by picking only those students that wanted to go to MATHS would improve the program.

Parent perceptions. In May, phone interviews were conducted with randomly selected parents concerning program implementation at MATHS. Completed surveys for 57 parents were collected and the results are presented in Table 4. Overall, parents(91%) seem to be satisfied with MATHS's first year (item 10). Of particular interest, 95% of the parents said the magnet school selection process was fair (item 1), while 90% said their child's application was handled in a reasonable amount of time (item2). An incredible 100% of the respondents said they understood the Advanced Technical magnet theme (item 12). Additionally there was total agreement(100%) that MATHS was kept clean and in good repair (item 14).

In open-ended questions, parents were asked how they learned about MATHS and why they chose to send their kids there. Thirty-seven percent of the parents stated that they learned about MATHS through the district's office, while 14% cited the magnet school's application form. The student chose MATHS according to 23% of the respondents.

Student perceptions. Late in the second semester students were surveyed about the first year of theme implementation at MATHS. Results compiled from 88 completed surveys are presented in Table 5. Three-fourths of the students stated that they liked the advanced technology classes (item 4). Students wanted to attend MATHS this year according to 78% of those responding (item 8). Encouragingly, 75% of the students believe that their education at MATHS will help them reach their future educational or occupational goals (item 11). Eighty-four percent of the respondents want to go back to MATHS next year (Item 15).

Achievement.

Tests of Achievement and Proficiency. A summary of data from 1991 Tests of Achievement and Proficiency (TAP) is presented in Table 6, by grade level and minority status. Reading, math and written expression scores for MATHS and the Kansas City, Missouri School District are displayed as percentile ranks converted from mean grade equivalents. Scores are also compared to the national norm(50th percentile). MATHS scores ranged from 38 in ninth grade written expression to 24 in ninth grade math, with none of the scores reaching district

Table 4

Metropolitan Advanced Technical High School
Parent Perceptions, Spring 1991
(N= 57)

Item	Content	Responses	N	%
1.	The way students are selected for magnet school is fair.	Agree	54	95
		Disagree	2	5
2.	My child's application to the Advanced Technical Magnet was handled in a reasonable amount of time.	Agree	51	90
		Disagree	6	11
3.	Metropolitan Advanced Technical Magnet was my child's first choice.	Agree	37	66
		Disagree	19	34
4.	Communications from Metropolitan have been helpful and understandable to me.	Agree	53	93
		Disagree	4	7
5.	My participation at Metropolitan is encouraged.	Agree	51	90
		Disagree	6	11
6.	Overall, the administration at Metropolitan is responsive to my concerns.	Agree	53	95
		Disagree	3	5
7.	Overall, I am satisfied with the teachers at Metropolitan.	Agree	48	87
		Disagree	7	13
8.	I am satisfied with the progress my child has made in basic skills areas at Metropolitan.	Agree	50	91
		Disagree	5	9
9.	I am satisfied with the progress my child has made in advanced technology classes at Metropolitan.	Agree	51	93
		Disagree	4	7
10.	Overall, I am satisfied with Metropolitan.	Agree	50	91
		Disagree	5	9
11.	My child enjoys participating in career activities at Metropolitan.	Agree	51	93
		Disagree	4	7
12.	I understand the Advanced Technical Magnet theme.	Agree	55	100
		Disagree	--	--
13.	Overall, my child feels good about the education he/she is receiving at Metropolitan.	Agree	50	93
		Disagree	4	7
14.	I believe that Metropolitan is kept clean and in good repair.	Agree	54	100
		Disagree	--	--
15.	I believe that Metropolitan offers a quality education to all students.	Agree	50	93
		Disagree	4	7
16.	I believe Metropolitan offers a safe environment for my child.	Agree	47	87
		Disagree	7	13
17.	My child enjoys reading and discussing technical literature.	Agree	49	91
		Disagree	5	9
18.	My child usually shares with me his/her day's activities at Metropolitan.	Agree	37	69
		Disagree	17	32
19.	My child seems more responsible this year.	Agree	43	80
		Disagree	11	20

Table 4 (continued)

Metropolitan Advanced Technical High School
Parent Perceptions Spring 1991
(N= 57)

Item Content	Responses	N	%
20. I would recommend Metropolitan to other parents.	Agree	45	83
	Disagree	9	17
21. My child rides a bus or taxi to school.	Agree	37	65
	Disagree	20	35
22. The transportation of my child to and from Metropolitan is done in a reasonable amount of time.[1]	Agree	26	68
	Disagree	12	32
23. I believe the transportation of my child to and from Metropolitan is provided safely.[1]	Agree	24	65
	Disagree	13	35
24. All of my high school age children go to Metropolitan.	Agree	20	39
	Disagree	32	62

Note: Percentages are rounded to the nearest whole percent.
[1] Asked only of those parents agreeing with item 21.

or national levels. Differences ranged from six percentile ranks below the district average in both ninth and tenth grade reading to 12 below in ninth grade math.

When scores are broken down by minority status, minority students scored lower than their non-minority counterparts. Minority students' percentile ranks ranged from 38 in ninth grade written expression to 22 in ninth grade math, while non-minority scores went from 44 in tenth grade reading to 35 in ninth grade math. Scores for minority students ranged from one percentile rank below non-minority scores in ninth grade written expression to 19 below in tenth grade math. The preceding discussion is for descriptive purposes only, no conclusions should be drawn because of large differences between the two groups in number of students taking the tests. In ninth grade, 33 non-minority students took the three subtests reported above, while approximately five times as many minority students did. The difference was smaller in tenth grade with 18 non-minority and 29 minority students.

Missouri Mastery and Achievement Tests. Results of the Missouri Mastery and Achievement Tests(MMAT) for 1991 are presented for tenth grade in Table 7. Mean scale scores for reading/language arts, math, science and social studies are displayed for MATHS, the district and the state of Missouri. The MMAT is a set of criterion referenced tests designed by the state and first administered in 1987. The tests are administered to students in grades three, six,

Table 5

Metropolitan Advanced Technical High School
Student Perceptions, Spring 1991
(N= 88)

Item Content	Responses	N	%
1. I like coming to school every day.	Agree	51	59
	Disagree	36	41
2. I feel welcome in all my classes.	Agree	53	62
	Disagree	33	38
3. I like doing the homework assignments the teachers give me.	Agree	34	40
	Disagree	51	60
4. I like the advanced technology classes.	Agree	65	76
	Disagree	21	24
5. I like the teachers at Metropolitan Advanced Tech.	Agree	50	62
	Disagree	31	38
6. I think this is a clean school.	Agree	60	69
	Disagree	27	31
7. I have learned different aspects of business this year.	Agree	47	55
	Disagree	39	45
8. I wanted to attend Metropolitan Advanced Tech this year.	Agree	69	78
	Disagree	19	22
9. This year at Metropolitan Advanced Tech, I have learned much about responsibility.	Agree	46	55
	Disagree	38	45
10. I think my school is safe.	Agree	55	64
	Disagree	31	36
11. I believe my education at Metropolitan Advanced Tech will help me reach my educational or occupational goals.	Agree	64	75
	Disagree	21	25
12. I ride in a taxi or bus to school.	Agree	64	74
	Disagree	22	26
13. I think it takes too long to get to school in the morning.[1]	Agree	22	34
	Disagree	42	66
14. I think it takes too long to get home after school.[1]	Agree	32	50
	Disagree	32	50
15. I want to come back to Metropolitan Advanced Tech next year.	Agree	73	84
	Disagree	14	16

Note: Percentages are rounded to the nearest whole percent.

[1] Asked only of those students agreeing with item 12.

Table 6
Metropolitan Advanced Technical High School
Tests of Achievement & Proficiency
Percentile Ranks by Grade
Spring 1991

Test	Minority		Non-Minority		Combined		District
Grade	N	%	N	%	N	%	%
Reading							
9	165	31	33	41	198	35	41
10	29	32	18	44	47	37	43
Math							
9	164	22	33	35	197	24	36
10	29	23	18	42	47	31	40
Written Expression							
9	169	38	33	39	202	38	45
10	29	34	18	38	47	35	44

Note: Percentile Ranks are converted from mean grade equivalents.

Table 7
Metropolitan Advanced Technical High School
Missouri Mastery & Achievement Tests
Average Scale Scores
Grade 10, Spring 1991

Test	MATHS	District	State
Reading/Language Arts	260	273	313
Mathematics	259	278	326
Science	269	282	327
Social Studies	256	268	302

eight and ten. According to the *MMAT, Guide to Score Interpretation and Use* (Missouri Department of Elementary and Secondary Education, 1991), meaningful strengths or weaknesses between groups can be determined using the average student error of measurement of

25. Using this criterion, MATHS scores are comparable to those of the district, but are weak in comparison to state scores across all content areas.

Degrees of Reading Power Test. Ninth grade MATHS and district results for the 1991 administration of the Degrees of Reading Power Test(DRP) are presented as percentile ranks in Table 8. The DRP is a criterion referenced test that measures a student's ability to read prose at various levels of difficulty. Three scores are reported, of importance in this evaluation is the instructional level score, as DRP units, which teachers may use as instructional tools. MATHS ninth graders were 11 percentile ranks below the district average for ninth grade, while both MATHS and district scores were well below the national average of 50.

Summary and Recommendations

MATHS has finished its first year of theme implementation with the end of the 1990-1991 school year. Enrollment, observation, perception and achievement data were examined to determine the degree and success of theme implementation.

Enrollment data indicate that MATHS did not reach the court ordered goals of 60% minority, 40% non-minority, though it was close in tenth grade(63% minority). Overall, MATHS had an enrollment that was 75% minority, 25% non-minority. When taken as a whole, the program's enrollment was 76% of capacity, with most of the students coming from ninth grade which was overfilled.

All classes designed for ninth and tenth graders were staffed and offered. Site visits found physical evidence of theme implementation consisting of displays, job opportunities, career choices, occupational cluster information and equipment. Observations documented the occurrence of major theme components in classrooms. The percentage of time these occurrences took place was somewhat low probably because eleventh and twelfth grades, time when

Table 8

Metropolitan Advanced Technical High School Degrees of Reading Power Test Percentile Ranks for Grade Nine Spring 1991

Grade	MATHS	District
Nine	27	38

Note: Percentile Ranks based on Mean DRP Scores.

students would be concentrating on an occupational cluster, were to be added one grade at a time starting in 1991-1992.

Perception data, for the most part, was very positive about MATHS's first year. Teachers were satisfied with teaching at MATHS, academic support services and the facilities. They were clear about the program's goals and objectives, and reported infusing theme components into classroom activities on a regular basis. Teachers were not satisfied with the amount of teaching materials, resources and supplemental materials available to them. Almost all teachers did not believe that parents were involved at MATHS. A little more than half of the teachers found the activities covered in staff development sessions helpful in the classroom. Thirty-two percent of the teachers mentioned student behavior as a hindrance to theme implementation.

Parents were satisfied with the magnet school selection process, teachers, child's progress in basic skills and technology classes, and MATHS in general. All parents surveyed, understood the theme and thought that MATHS was kept clean and in good repair.

A large majority of students surveyed want to go to MATHS next year. About three-quarters of the respondents like their technology classes and believe that the education received at MATHS will help in reaching further educational or occupational goals.

Reading, math and written expression TAP scores were below district levels for both grades at MATHS. When broken down by minority status, scores for minority students were below their non-minority counterparts. Large differences between the two groups on the number of students taking the test, prevent conclusions being drawn. Tenth grade MMAT scores were comparable to district levels but below state scores across all content areas. DRP scores for ninth grade were below district and national levels.

The following recommendations are offered based on findings in this report:

1. <u>If a more current planning outline exists, make it available to the District's Evaluation Office</u>. The opening of MATHS was delayed from September, 1989 to September, 1990. This report was based on an evaluation design drawn from a MATHS's planning outline dated May, 1988.

2. <u>Consult with faculty when planning staff development sessions</u>. Just over half of the teachers agreed that staff development sessions helped them in their classrooms.

3. <u>Explore student behavior and the handling of that behavior by faculty and administration</u>. Approximately one-third of the teachers mentioned student behavior as a hindrance to theme implementation. If it is found that misconduct is a problem, a student

handbook listing various behaviors and consequences of those behaviors may help solve the problem. This would only work however, if consequences were consistently carried out.

4. Increase parental involvement at MATHS. Although a large majority of parents agreed that their participation was encouraged, very few teachers believe that parents are involved at MATHS. If a student handbook is warranted, engaging parents to help in its development may have two positive outcomes; getting parents involved and decreasing student misconduct.

5. Increase efforts at recruiting students, especially non-minority. MATHS was filled to 76% of program capacity, indicating room for more students. Overall, MATHS was 75% minority, 25% non-minority. Although tenth grade was closer to federal goals(60% minority, 40% non-minority), there were more than three times as many ninth graders. Ninth grade was 78% minority, a ninth grade class like that again in September, 1991 would not help MATHS achieve its enrollment goals.

References

Hale, P.D. & Levine, D.V. (1986). *Long Range Magnet School Plan.* Kansas City, Mo: Kansas City, Missouri School District.

Metropolitan Advanced Technical High School Task Force (1988). *Metropolitan Advanced Technical High School Planning Outline.* Kansas City, MO: Kansas City, Missouri School District.

Missouri Department of Elementary and Secondary Education (1990). *MMAT Guide to Score Interpretation and use.* Jefferson City, MO: Missouri Department of Elementary and Secondary Education.

Research Office (1990). *September 26, 1990, Student Memberhisp.* Kansas City, MO: Kansas City, Missouri School District.

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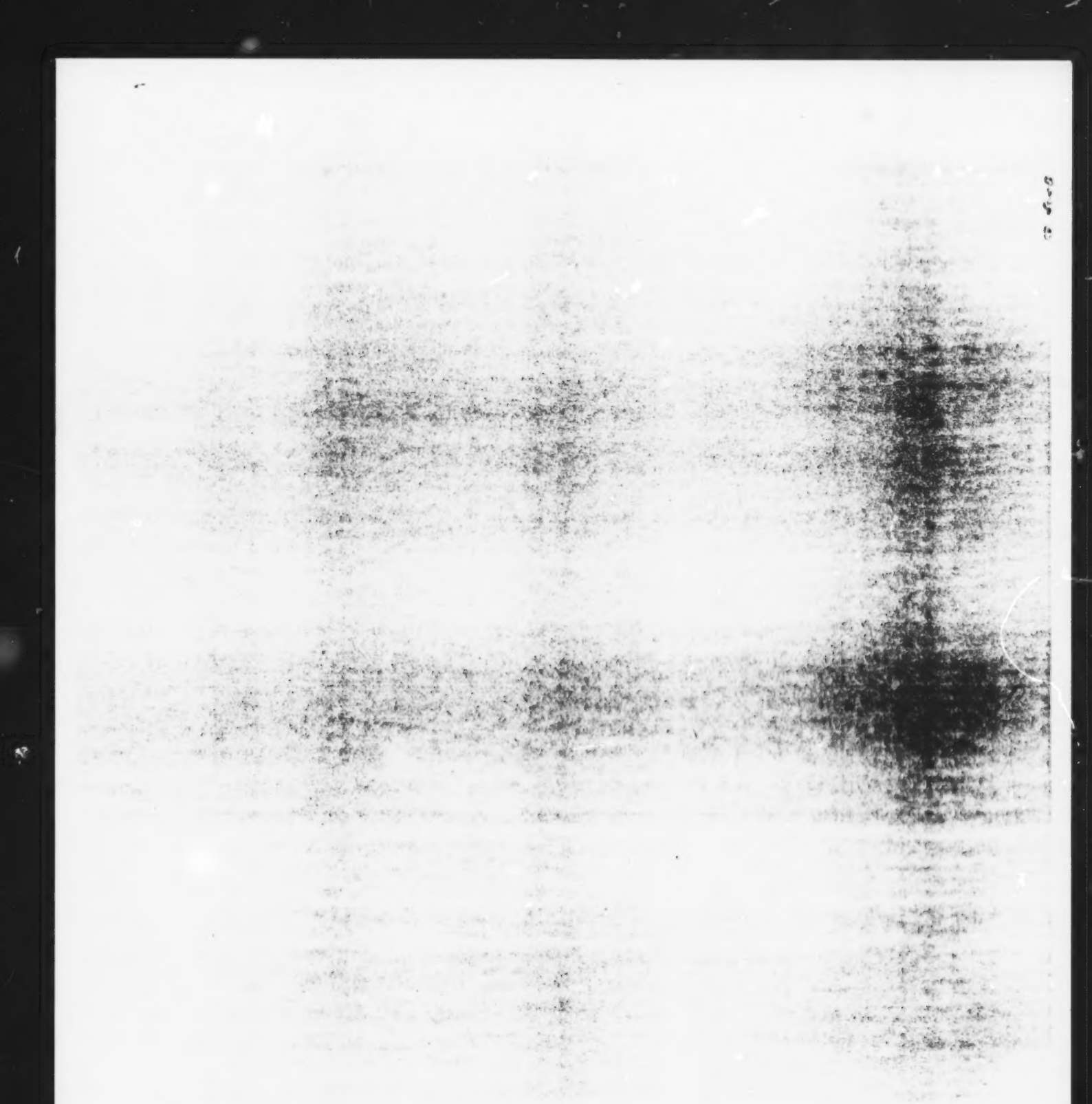

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